phia, Dana of New York, and others have advocated its use. The former encouraged the author to use it freely in suitable cases and under the right conditions, which is that of rest, preferably in bed, and with due regard to intestinal activity. This has been combined with quinin by the author in selected cases with good results.

The recent literature contains but meagre data concerning its manifest uses in trifacial neuralgia. Therefore it seems advisable to call attention to it at this time. Also, it seemed wise, in the beginning of this paper, to emphasize the fact that all cases of headache or trifacial irritation are not to be treated by any routine method; and that in selected cases (viz: true trifacial neuralgia) is strychnin in intensive dosage a rational therapeutic agent.

PELLAGRA.

By ANSTRUTHER DAVIDSON, M. D., Los Angeles.

I do not intend to enter into any discussion of the theories of causation, pathology or prevalence of Pellagra. These things have been already discussed and recorded in our journals and text books, by abler men of much experience. I wish but to record this case and add a mite of information on the probable causes we meet in California.

M. G., a carpenter, aged 74, complained of diarrhea of five or six years' duration, sometimes not very troublesome but always in some degree present. For the last few months the bowels moved four or five times a day and once or twice at night, the consequent weakness was his only complaint. Last year his hands, he said, "cracked, scaled and bled," once in the spring and again in the autumn. This year they had already scaled once (July, 1912). His hands presented a dark reddish appearance with a slightly raised well defined cuff border, the back of the fingers to the first phalanx was scaling in large plaques. The center of the dorsum showed paler, semicicatricial tissue, as if the scaling had been deeper in that locality. Knee reflex exaggerated, but no other symptoms referable to the nervous system, except marked irritability of temper. I prescribed for his diarrhea and saw him twice in the next ten days. As he did not appear the following week it was found, on inquiry, he had become suddenly much worse and died. He was born in the East but had lived in Los Angeles for about ten years. Unmarried, he lived alone, cooking his own meals, of which cornmeal mush was a daily feature. This case is undoubtedly one of pellagra and one of the comparatively few discovered in Southern California.

This disease has now been found in nearly all the states of the Union and in most European countries. The cause of pellagra has been attributed to the eating of diseased maize and lately by Sambon to infection by a Simulium.

As the disease in many respects resembles a toxic erythema in its appearance, it is not at all improbable that it is a cutaneous reaction from either a special food, or some special metabolic disturbance that is associated with some toxemia. This man, as we see, ate largely of corn, and corn even when not diseased, if much used, is prone to cause cutaneous irritation. The popular idea that corn is heating to the skin is correct, as its use in sufferers from urticaria and acne is prone to increase the inflammatory appearance. Oatmeal has the same tendency. Corn is not much used in the dietary of the people of California and if the cause of pellagra lies therein we may not expect many in this state. If the Simulidae are the source of infection we are well supplied with probable sources. California has at least six species of the genus, viz:

S. meridionale, Riley. Fresno.
S. venustum, Say. Fresno.
S. bracteatum, Coq. Los Angeles Co.
S. pictipes, Hagen. Los Angeles Co.
S. vittatum, Zett. Los Angeles Co.
S. virgatum, Coq. Los Angeles Co.

I have no acquaintance with the northern part of the state, but I presume the species are even more abundant there than in the south, as the conditions as regards moisture are more favorable to the propagation of the insects.

The most common species here, S. bracteatum, is a small dark fly popularly classed among the gnats as it bites somewhat severely. It is to be found around horses in all the mountain camps or near streams up to 8000 feet altitude in Southern California. They suck the blood from the flanks and inside of the ears of horses and donkeys. The latter especially suffer. Towards the end of the summer the inside of the ears are thickly spotted with blood-stained crusts where the insects have repeatedly fed. If all the Simulidae are capable of transmitting pellagra the disease ought to be fairly common, but in this genus, as in the Culicidae, it may be that only certain species are capable of conveying the infection. Simulium reptans, the species that Sambon seems to think is the communicator of pellagra, has not been found in California so far as I know. Much work must be undertaken before the true cause can be discovered, and it is possible that the Simulidae may be but the intermediate host in conveying the infection from horse or donkey to man.

ORTHOPEDIC TREATMENT OF SPINAL POLIOMYELITIS.

By JAMES T. WATKINS, M. D., San Francisco.

The present paper was delivered in abstract before the California State Medical Society at Del Monte in April, 1912. The time limit set made it necessary to confine its scope to a consideration only of the principles governing the operative side of treatment. Here in the full text other, and if anything more important features of treatment are also given consideration. Occasional repetitions appear in the text where facts were deemed sufficiently important to warrant reiteration.

(Continued from Page 377, September Journal, 1913.)

"'1. Do you consider tendon transplantation in properly selected cases a useful and satisfactory operation?'